

App. Serial No.: 10/634,421
Atty. Docket No.: 0003-033P1

REMARKS

These remarks are in response to the Office Action dated April 8, 2005, which has a shortened statutory period for response set to expire July 8, 2005. A one-month extension, to expire August 8, 2005, is requested in a petition filed herewith.

Claims

Claims 1-32 are pending in the above-identified application. Claims 1-14, 16-25, and 27-32 are rejected over prior art. Claims 15 and 26 are objected to, but indicated to contain allowable subject matter. Claims 1, 4-7, 9-16, and 20-22 are amended and Claim 3 is canceled. Claims 2, 8, 17-19, and 23-32 remain as filed. New Claims 33-35 are added. Reconsideration is requested.

Rejections Under 35 U.S.C. § 102 (Van Abbema Reference)

Claims 1-5, 8-11, 12-14, 18-19, and 30-32 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Van Abbema (USPN 4,572,726).

Claims 1-5

With respect to Claims 1-5 and 8-11, the Examiner writes (in part):

Van Abbema teaches a pump for moving a product comprising a separating apparatus (20), a vacuum source (10) for providing a vacuum to the separating apparatus, and a pressure valve apparatus (air lock device not shown; column 4 lines 20-26) for allowing the product to be removed from the separating apparatus. Van Abbema further teaches wherein the separating apparatus is a cyclone separator. Van Abbema further teaches a forced air source (10) for blowing the product out of the pump. Van Abbema further teaches wherein the forced air source is an air pump and the vacuum source is an air pump. Van Abbema further teaches wherein the forced air source and vacuum source are a single air pump.

Applicants respectfully request reconsideration in view of the amendments made herein.

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The standard for anticipation is set forth in M.P.E.P. § 2131 as follows:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

As amended herein, Claim 1 recites (in part) "an air pump for providing a vacuum to the separating apparatus." Van Abbema does not teach or suggest an air pump for providing a vacuum. Rather, Van Abbema teaches the use of a fan (10). The cyclone separator of Van Abbema is designed generally for transporting grain and small seeds, and is indicated to be "particularly useful for collecting the last small amounts of the grain which cannot be transported by an auger." (Col. 1, Lines 15-17) Indeed, the object of Van Abbema's invention is to "provide a cyclone separator of an improved nature which overcomes the problems of separation of low mass particulate matter." (Col. 1, Lines 48-51) Thus, Van Abbema uses a fan, which is sufficient to generate the air currents used to transport grain and/or small seeds.

In contrast, Applicant's invention is designed to transport a liquid-solid mixture in general, and wine must or pomace in particular. The fan of Van Abbema would be incapable of moving this type of heavy, wet product. Indeed, Van Abbema suggests that blockages can even occur when transporting grain and light seeds.

Those skilled in the art recognize and understand the distinction between fans and air pumps. For example, a fan is defined by The Random House College Dictionary as "any device for causing a current of air by the movement of a broad surface or a number of such surfaces." The same dictionary also defines a fan as "a series of revolving blades supplying air for winnowing or cleaning grain" (emphasis added). A pump on the other hand is defined by the same dictionary as "an apparatus or machine for moving or altering the pressure of fluids in confined spaces, as by suction or pressure."

Finally, in order to further clarify the term "air pump" Applicants expressly disclaim any interpretation of the term "air pump" that would read on the fan of Van Abbema.

Because Van Abbema does not teach every limitation of amended Claim 1, Van Abbema does not anticipate amended Claim 1. Claims 2 and 4-5 depend directly or indirectly from

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Claim 1 and are therefore distinguished from the cited prior art for at least the reasons provided above with respect to amended Claim 1.

Applicant also notes that Van Abbema provides no suggestion or motivation for substituting an air pump in place of the fan 10. The conveying apparatus of Van Abbema is used for separating and extracting dry particulate matter such as grain and small seeds from an air stream. Fan 10 is suitable for the conveying apparatus of Van Abbema, because grain is relatively light and can be moved by air currents. Further, Van Abbema provides no indication that the conveying apparatus could be used to transport a liquid or liquid-solid mixture.

Claim 8

With respect to Claim 8, the Examiner writes:

“Van Abbema further teaches wherein the pressure valve apparatus is a rotary dump valve.”

Applicants respectfully traverse.

Van Abbema does not teach “a rotary dump valve” as recited by Claim 8. Rather, Van Abbema recites that:

The collector 14 includes an air lock (not shown) which is of conventional structure and hence well known to one skilled in the art but prevents air passing in the duct 12 from the fan 10 re-entering the container 21 from the bottom while allowing the particulate material to enter the duct 12 after collection at the bottom of the container. (Column 4, Lines 20-26, emphasis added).

Because Van Abbema does not specifically teach a “rotary dump valve,” as recited by Claim 8, Van Abbema does not anticipate Claim 8. Further, there is no indication in Van Abbema that a rotary dump valve is suitable to transfer liquid or semi-liquid product between the vacuum chamber 20 and depository 22.

Therefore, because the cited reference does not disclose every limitation of Claim 8, the cited reference does not anticipate Claim 8. In addition, Claim 8 depends from Claim 1 and is therefore distinguished from the cited reference for at least the reasons provided above with respect to amended Claim 1.

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Claims 9-11

With respect to Claims 9-11, the Examiner writes:

Examiner notes that claims 9-11 recite an intended use for the pump, but do not further limit the structure of the pump. Van Abbema clearly teaches separating a solid material from an airflow, therefore because the structural limitations of the pump are anticipated by Van Abbema, it is anticipated that the pump is also adapted to pump a wine product, wine must, and wine pomace.

Claims 9-11 are amended to recite physical features of the pump as opposed to intended uses. In particular, Claim 9 now recites "the pump is capable of pumping a liquid-solid mixture." Claim 10 now depends from Claim 9 and recites "the liquid-solid mixture is a wine product." Claim 11 now depends from Claim 10 and recites "the wine product is wine must." Claims 9-11 now recite structural limitations of the pump. In particular, whether or not the pump has the physical capability of pumping the recited material.

There is no indication in Van Abbema that the pneumatic conveying apparatus of Van Abbema could be used to pump a liquid-solid mixture, a wine product, or wine must. Therefore, Van Abbema does not anticipate any of Claims 9-11. In addition, Claims 9-11 depend, either directly or indirectly from Claim 1, and are therefore distinguished from the cited reference for at least the same reasons as amended Claim 1.

Claims 12-14, and 18

The Examiner writes (in part);

Van Abbema teaches a wine must pump for pumping a wine product comprising a separator (20) for separating wine product from air, a vacuum source (10) for drawing the wine product into the separator, a valve apparatus (air lock device not shown; column 4, lines 20-26) for allowing the wine product to fall out of the separator into a depository (14), and a compressed air source (10) for blowing the wine product out of the wine must pump. Van Abbema further teaches wherein the vacuum source and the compressed air source are an air pump, wherein at least some of the air drawn out of the separator is used to blow the wine product out of the wine must pump. Van Abbema further teaches wherein the separator is a cyclone separator.

...

Examiner notes claim 12 recite structural limitations for a "pump", and therefore because Van Abbema clearly teaches

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separating a solid material from an airflow, it is anticipated that the pump is clearly capable of separating a wine product from an airflow.

Applicants respectfully request reconsideration in view of the amendments made herein.

As amended herein Claim 12 recites:

12. A wine must pump for pumping a wet wine product, comprising:
a separator for separating the wet wine product from air;
an air pump providing a vacuum sufficient to draw the wet wine product into the separator;
a valve apparatus for allowing the wet wine product to fall out of the separator into a depository; and
a blower providing compressed air sufficient to blow the wet wine product out of the wine must pump.
(emphasis added)

Initially, Applicants point out that Van Abbema does not teach "a wine must pump for pumping a wet wine product," as recited by Claim 12. Rather, Van Abbema teaches a device for separating and transporting dry, low mass grain-like material. For the reasons provided above, Applicants respectfully assert that the pneumatic conveying apparatus of Van Abbema cannot be fairly characterized as "a wine must pump," nor could it be used to pump a liquid or semi-liquid material.

In addition, Van Abbema does not disclose "an air pump providing a vacuum source sufficient to draw the wet wine product into the separator," as recited by amended Claim 12. As stated above, the fan 10 of Van Abbema is not "an air pump" as recited in Claim 12, nor would someone of ordinary skill in the art recognize the fan 10 as such. Even if the fan 10 could be characterized as an air pump (which Applicants vehemently assert that it cannot), the fan 10 would not provide a vacuum source "sufficient to draw the wet wine product into the separator," as recited by amended Claim 12. Instead, the fan 10 is designed create an air stream to move low mass particulate materials as described above.

Van Abbema also does not disclose "a blower providing a compressed air source sufficient to blow the wet wine product out of the wine must pump," as recited by amended Claim 12. Again, Van Abbema only discloses a fan 10. While fan 10 produces sufficient air to move dry, particulate matter such as grain, for the reasons provided above the fan 10 cannot be fairly characterized as being able to provide "a compressed air source" sufficient to blow the wet (high mass relative to grain) wine product out of the wine must pump.

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Because Van Abbema does not disclose all the limitations of amended Claim 12, Van Abbema does not anticipate amended Claim 12. Claims 13-14 and 18 depend directly from Claim 12, and are distinguished from the cited reference for at least the same reasons provided with respect to amended Claim 12.

Claim 19

With respect to Claim 19, the Examiner writes (in part):

Van Abbema further teaches an in line silencer (30) for reducing noise from caused by air exiting the separator.

Applicants respectfully traverse.

As originally filed, Claim 19 recited "an in line silencer for reducing noise caused by air exiting the separator." Van Abbema does not teach such a silencer. Instead, Van Abbema teaches a filter 30 to filter air exiting the cyclone separator 20 via the duct 13. Van Abbema does not indicate that the filter 30 silences air exiting cyclone separator 20. Van Abbema also does not indicate that the fan 10 is noisy enough to require silencing.

Therefore, because Van Abbema does not teach all of the limitations of Claim 19, Van Abbema does not anticipate Claim 19. In addition, Claim 19 depends from Claim 12, and therefore is distinguished from the cited reference for at least the same reasons provided above with respect to amended Claim 12.

Claim 30

With respect to Claim 30, the Examiner writes:

Van Abbema teaches a method for moving a product comprising drawing the product into a chamber (20) via vacuum (10), drawing gasses from the chamber (outlet duct 13) via vacuum to separate the gasses from the product, and pushing the product from the chamber (outlet duct 12) via compressed gasses (from vacuum 10).

Applicants respectfully traverse.

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As originally filed, Claim 30 recited:

30. A method for moving a product, comprising:
drawing the product into a chamber via vacuum, the product
being a mixture of liquid and solids;
drawing gasses from said chamber via vacuum to separate said
gasses from said product; and
pushing the product from said chamber via compressed
gasses. (emphasis added)

As described above, Van Abbema does not disclose a step of "pushing the product from said chamber via compressed gasses," as recited by Claim 30. Rather, Van Abbema teaches a fan 10 that provides an air stream whereby seeds and grain are carried. Because Van Abbema does not disclose all the limitations of Claim 30, Van Abbema does not anticipate Claim 30.

Claim 31

With respect to Claim 31, the Examiner writes:

Van Abbema teaches a pump comprising means (10) for drawing a product and gas mixture into a chamber (20), means (20) for separating the product from the gas, and means (10) for removing the product from the chamber.

As originally filed, Claim 31 recited (in part) "means for drawing a product and gas mixture into a chamber" and "means for removing the product from the chamber," and therefore must be interpreted according to the provisions of 35 U.S.C. § 112, Paragraph 6, which provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

M.P.E.P. § 2106 sets forth the procedure for examination of means plus function claims, and provides:

Where means plus function language is used to define the characteristics of a machine or manufacture invention, claim limitations must be interpreted to read only on the structures or materials disclosed in the specification and "equivalents thereof."

Applicants respectfully aver that nothing in the cited reference can be fairly characterized as an equivalent to the "means for drawing a product and gas mixture into a chamber" and the "means for removing the product from the chamber" disclosed in Applicants' specification. For

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example, Applicants' specification discloses an air pump 18 as a means for drawing (under vacuum) a wine product and gasses into a vacuum chamber 20. In addition, the air pump 18 also serves as a means for removing the wine product from the vacuum chamber 20 via compressed gasses. In contrast, the Van Abbema discloses a fan 10 for drawing low mass particulate matter into cyclone separator 20 and for blowing the particulate matter out the outlet duct 12. For the reasons provided above, the fan 10 of Van Abbema cannot be fairly characterized as an equivalent to an air pump as disclosed by the present invention. Accordingly, Claim 31, when properly interpreted according to 35 U.S.C. § 112, Paragraph 6, does not read on the structure of the cited reference. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 31 under 35 U.S.C. § 102.

Claim 32

With respect to Claim 32, the Examiner writes:

Van Abbema teaches a pump comprising a chamber (20), an inlet port (11) coupled to the chamber to facilitate the flow of product into the chamber, an outlet port for discharging the product from the pump, a vacuum port (13) coupled to the chamber, a vacuum source (10) coupled to the vacuum port to provide a negative pressure in the chamber, whereby the product can be drawn into the chamber through the inlet port, a pressurized gas source (10), and a mixing valve (air lock device not shown; column 4, lines 20-26) coupled to the chamber, the outlet port, and the pressurized gas source, whereby the product can be pushed out the outlet port by the pressurized gas (column 4, lines 45-47).

Applicants respectfully traverse.

As originally filed, Claim 32 recited (in part) "a pressurized gas source" and "a mixing valve coupled to said chamber, said outlet port, and said pressurized gas source, whereby said product can be pushed out said outlet port by said pressurized gas." For the reasons provided above, the fan 10 of Van Abbema is not "a compressed gas source" nor does it provide "pressurized gasses."

Therefore, because Van Abbema does not disclose all the limitations of Claim 32, Van Abbema does not anticipate Claim 32.

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Rejections Under 35 U.S.C. § 102 (Sisk Reference)

Claims 1, 3-4, 8-13, and 30-32 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Sisk (USPN 5,053,063).

Claims 1, 3, 4, and 8-11

With respect to Claims 1, 3 and 4, the Examiner writes:

Sisk teaches a pump for moving a product comprising a separating apparatus (9), a vacuum source (114) for providing a vacuum to the separating apparatus, and a pressure valve apparatus (63) for allowing the product to be removed from the separating apparatus. Sisk further teaches a forced air source (67) for blowing the product out of the pump. Sisk further teaches wherein the forced air source is an air pump and the vacuum source is an air pump.

Applicants respectfully request reconsideration in view of the amendments made herein.

Claim 1 is amended to incorporate similar limitations to those of Claim 3, and Claim 3 is canceled. Accordingly, Claim 1 recites (in part) "a blower for blowing the product out of the pump." Sisk does not teach "a blower for blowing the product out of the pump," as recited by amended Claim 1. Rather, Sisk teaches one or more air flow valves 67 that permit outside air to flow through the recovery chamber 65 and into product line 57. For example, Sisk provides:

One or more pneumatic or air flow valves 67 may be associated relative to the recovery chamber 65, such that outside air represented by the arrows 0, may enter into the recovery chamber 65 and assist in conveying the accumulated product particles A from the recovery chamber 65 back into the product line 57 via an interconnecting passageway 69 extending between the recovery chamber 65 and the product line 57. (Column 9, Line 66 - Column 10, Line 5).

Clearly, the air flow valve 67 is not "a blower" as recited by amended Claim 1. A blower provides a forced air source, whereas air flow valves 67 merely allow outside air to flow through recovery chamber 65 and into product line 57 due to the pressure differential between the inside of storage tank 5 and the outside atmosphere. Note that product line 57 is under vacuum when loading particulate matter into the storage tank 5 from recovery chamber 65. For example, at Column 9, Lines 36-39, Sisk provides that "a vacuum source is connected to the product line 57 so as readily draw free flowing bulk particulate material into the storage tank or chamber 5 of the

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hopper truck 1." Therefore, accumulated product particles A in the recovery chamber 65 are sucked back into storage tank 5 under vacuum, rather than being blown into storage tank 5.

For the foregoing reasons, Sisk does not disclose every limitation of amended Claim 1. Therefore, Sisk does not anticipate amended Claim 1. Claim 4 is amended to depend from Claim 1, and is therefore distinguished from the cited prior art for at least the reasons provided above with respect to Claim 1.

Claim 8

With respect to Claim 8, the Examiner writes:

Sisk further teaches wherein the pressure valve apparatus is a rotary dump valve.

Applicants respectfully traverse.

Sisk discloses a gravity flow valve 63. Sisk does not disclose that the gravity flow valve 63 is a rotary dump valve as described by the present invention. It does not appear to Applicants that Sisk discloses exactly how the gravity flow valve 63 operates, other than it "allows the accumulated product particles A to be gravity flow conveyed" (Sisk, Column 9, Lines 63-64).

Therefore, because the cited reference does not disclose all the limitations of Claim 8, the cited reference does not anticipate Claim 8.

Claims 9-11

With respect to Claims 9-11, the Examiner writes:

Examiner notes that claims 9-11 recite an intended use for the pump, but do not further limit the structure of the pump. Sisk clearly teaches separating a solid material from an airflow, therefore because the structural limitations of the pump are anticipated by Sisk, it is anticipated that the pump is also adapted to pump a wine product, wine must, and wine pomace.

Applicants request reconsideration in view of the amendments to Claims 9-11.

As indicated above in response to the rejections of Claims 9-11 over Van Abbema, Claims 9-11 are amended to recite structural limitations relating to the pumps capability of pumping a liquid-solid mixture. Sisk is directed to a dust filtering and collection system for use with small particulate matter such as starch, flour, kaolin clay, soda ash, hydrate lime, plastic pellets, etc. (Sisk, Column 9, Lines 31-33). Sisk does not suggest that the dust filtering and

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collection system described could be used for or is capable of pumping a liquid-solid mixture, a wine product, or wine must. Therefore, Applicants respectfully aver that Sisk does not disclose all the limitations of any of Claims 9-11, and does not anticipate any of Claims 9-11.

Claims 12-13

With respect to Claims 12 and 13, the Examiner writes:

Sisk teaches a wine must pump for pumping a wine product comprising, a separator (9) for separating wine product from air, a vacuum source (114) for drawing the wine product into the separator, a valve apparatus 63 for allowing the wine product to fall out of the separator into a depository (65), and a compressed air source (67) for blowing the wine product out of the wine must pump. Sisk further teaches wherein the vacuum source and the compressed air source are an air pump.

Applicants respectfully traverse.

As amended herein, Claim 12 recites (in part) "a blower providing compressed air sufficient to blow the wine product out of the wine must pump." Sisk does not disclose a blower providing compressed air. Rather, as described above, the air flow valves 67 cited by the Examiner merely permit outside air to flow through the recovery chamber 65 and into the product line 57. Sisk also does not disclose that the flow of air is sufficient to move a wet wine product up through passage 69.

Furthermore, as amended herein, Claim 13 recites that the "blower is an air pump." However, air flow valves 67 do not constitute an air pump. Therefore, Sisk does not disclose the limitation recited by Claim 13.

Because Sisk does not disclose all the limitations of Claims 12 and 13, Sisk does not anticipate Claims 12 and 13.

Claim 30

With respect to Claim 30, the Examiner writes:

Sisk teaches a method for moving a product comprising drawing the product into a chamber (9) via vacuum (114), drawing gasses from the chamber (outlet duct 59) via vacuum to separate the gasses from the product, and pushing the product from the chamber (outlet duct 57) via compressed gasses (from pneumatic valve 67).

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Applicant respectfully traverses:

Sisk does not disclose a method including the step of "pushing the product from said chamber via compressed gasses," as recited by Claim 30. Rather, as described above, outside air enters through air flow valves 67 only due to the pressure differential between tank 5 and the outside atmosphere. Thus, accumulated product particles A are drawn into storage tank 5 via vacuum, and not pushed by compressed gasses.

Therefore, because Sisk does not disclose all the limitations of Claim 30, Sisk does not anticipate Claim 30.

Claim 31

With respect to Claim 31, the Examiner writes:

Sisk teaches a pump comprising means (114) for drawing a product and gas mixture into a chamber (9), means (29) for separating the product from the gas, and means (67) for removing the product from the chamber.

Applicants respectfully traverses.

As stated above, Claim 31 recites means plus function language, and therefore must be interpreted according to the provisions of 35 U.S.C. § 112, paragraph 6 and M.P.E.P. § 2106. In particular, Applicants respectfully aver that nothing in the cited reference can be fairly characterized as an equivalent to the "means for removing the product from the chamber" disclosed in Applicants' specification. For example, Applicants' specification discloses an air pump 18 for pushing the wine product out of the pump via compressed gasses. In contrast, as described above, the air flow valves 67 of Van Abbema only admit outside air into the recovery chamber 65. In addition, accumulated product particles are removed from recovery chamber 65 via vacuum. Therefore, Claim 31 when properly interpreted according to 35 U.S.C. § 112, Paragraph 6, does not read on the structure of the cited reference. Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 31 under 35 U.S.C. § 102.

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Claim 32

With respect to Claim 32, the Examiner writes:

Sisk teaches a pump comprising a chamber (9), an inlet port (53) coupled to the chamber to facilitate the flow of product into the chamber, an outlet port for discharging the product from the pump, a vacuum port (55) coupled to the chamber, a vacuum source (114) coupled to the vacuum port to provide a negative pressure in the chamber, whereby the product can be drawn into the chamber through the inlet port, a pressurized gas source (67), and a mixing valve (63) coupled to the chamber, the outlet port, and the pressurized gas source, whereby the product can be pushed out the outlet port by the pressurized gas (column 9 lines 66-68, column 10 lines 1-10).

Applicants respectfully traverse.

As originally filed, Claim 32 recites "a pressurized gas source" and "a mixing valve coupled to said chamber, said outlet port, and said pressurized gas source, whereby said product can be pushed out said outlet port by said pressurized gas." Sisk does not disclose these limitations. As stated above, air flow valves 67 are not a pressurized gas source. Rather, air flow valves 67 allow outside air into recovery chamber 65 so that the accumulated product particles A can be removed from recovery chamber 65 by vacuum via product line 57 such that the particles are reintroduced to storage tank 5.

Because Sisk does not disclose all the limitations of Claim 32, Sisk does not anticipate Claim 32.

For the above reasons Applicants request reconsideration and withdrawal of all the rejections under 35 U.S.C. § 102.

Rejections Under 35 U.S.C. § 103

Claims 23-25 and 27-29 are rejected under 35 U.S.C. § 103 as being unpatentable over Koehn (USPN 3,303,638) taken together with Van Abbema (USPN 4,572,726). The Examiner writes:

Koehn teaches a method for moving a wine product comprising applying a suction (vacuum tank 2) to a separator (43) to draw the wine product (grapes or berries) into the separator, removing the wine product from the separator into a depository (suitable closed collecting tank; column 6 lines 41-47). Koehn is

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silent as to blowing the wine product from the depository. Van Abbema teaches a method for moving a product comprising applying a suction (10) to a separator (20) to draw the product into the separator, removing the product from the separator into a depository (14), and blowing the product from the depository. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a step of blowing the product of Koehn from the depository so that the product moves efficiently to a desired location and is not reentrained with the airflow in the separator.

Applicant respectfully traverses.

M.P.E.P. § 2142 sets forth the procedural framework for the examination process of determining obviousness:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. If, however, the examiner does produce a *prima facie* case, the burden of coming forward with evidence or arguments shifts to the applicant who may submit additional evidence of nonobviousness...

M.P.E.P. §2143 sets forth the requirements of a *prima facie* case of obviousness:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Thus, if any element of the *prima facie* case of obviousness is not met, the obviousness rejection is improper and should be withdrawn.

As originally filed, Claim 23 recited:

23. A method for moving a wine product, comprising:
applying a vacuum to a separator to draw the wine product into the separator;
removing the wine product from the separator into a depository; and
blowing the wine product from the depository.

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Initially, Applicants would like to point out that the cyclone separator 43 of Koehn does not hold grapes or other wine product. Instead, the separator 43 holds the waste leaves and stems of grape vines from which the grapes were picked. For example, at Column 7, Lines 4-10, Koehn provides:

The function of the valve 40 is to provide the desired differential partial vacuum relationship in conduits 41 and 44 so that the berries will be satisfactorily drawn through the pipe 41 into the tank 2, and the leaves and trash will be carried into the cyclone, but not the berries, and a number of factors enter into the importance of making this adjustment. (emphasis added)

In addition, at Column 7, Line 71 through Column 8, Line 5 Koehn provides (in part):

The suction line continues from said outlet at an accelerated rate of speed to a second enlarged portion of the suction line that is in the form of a cyclone separator 43 wherein the leaves and stems fall by gravity, and from the upper end of this second enlarged portion of the suction line, the latter extends to the grape collector in the form of the length of pipe 33, which in itself forms part of the suction line, and to the vacuum tank 2, and the grapes in the collector or pipe 33 are carried by the suction line directly to the suction tank. (emphasis added)

For the above reasons, Applicants respectfully assert that Kuehn does not teach or suggest the steps of "applying a vacuum to a separator to draw the wine product into the separator" and "removing the wine product from the separator into a depository," as recited by Claim 23. Van Abbema also does not teach or suggest these limitations of Claim 23. In addition, for the reasons provided above with respect to 35 U.S.C. § 102 rejections of Claim 1, Van Abbema does not teach or suggest a means for blowing a wine product from a depository. Further, neither does Koehn teach or suggest the "blowing the wine product from the depository," as recited by Claim 23. Therefore, the cited references when combined do not teach or suggest all of the limitations of Claim 23, and so the third element of the *prima facie* case of obviousness is not satisfied.

Further, there is no suggestion to combine the references. First, there is no indication that it would be desirable to blow the stems and leaves out of whatever container they fall into from the separator 43. Rather, it would seem to be more efficient to just let the waste fall directly into a waste receptacle. Second, once the waste has passed through discharge valve 65 at the bottom of separator 43, there is no risk of it becoming reentrained with the airflow of the separator, as

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suggested by the Examiner, because the waste will be contained in the suitable closed collecting tank (presumably a trash container) cited by the Examiner. For these reasons, Applicants respectfully assert that there is no suggestion to combine the references, and the second element of the *prima facie* case of obviousness is not satisfied.

In summary, because the cited references do not teach or suggest all the limitations of Claim 23 and because there is no suggestion or motivation to combine the cited prior art to obtain the claimed invention, no *prima facie* case of obviousness is established with respect to Claim 23. Therefore, Applicants request withdrawal of the rejection of Claim 23 under 35 U.S.C. § 103. Claims 24-25 and 27-29 depend either directly or indirectly from Claim 23 and are distinguished from the cited prior art for at least the reasons provided above with respect to Claim 23.

Claims 6, 7, 16, and 17

Claims 6, 7, 16, and 17 are rejected under 35 U.S.C. § 103 as being unpatentable over Van Abbema (USPN 4,572,726). The Examiner writes:

Van Abbema teaches all of the limitations of claims 6, 7, 16, and 17 but is silent as to a cooling apparatus and demister. Cooling apparatus and demisters are common structures for use with a cyclone separator, therefore it would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a cooling apparatus to decrease the temperature of the airflow from forced air source (10), and a demister for removing moisture from an airflow when the airflow includes a source of liquid.

Applicants respectfully traverse.

Initially, Applicant respectfully disagrees with the Examiner's assertion that cooling apparatus and demisters are common structures for use with a cyclone separator. Indeed, although the Examiner has located and cited several references disclosing cyclonic separators, none of the references disclose a demister or a cooling apparatus. If demisters and cooling apparatus are commonly used with cyclonic separators, then the Examiner should be able to produce at least one reference showing a demister and a cooling apparatus in combination with a cyclonic separator. In order to establish a *prima facie* case of obviousness, evidence of such common use should be made of record.

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Claims 6 and 16

With regard to Claims 6 and 16, Van Abbema does not teach or suggest "a cooling apparatus for cooling air exiting the blower," as recited by Claim 6 or "a heat exchange apparatus for removing heat from compressed air exiting the blower," as recited by Claim 16. For at least the following reasons, Applicant's assert that there is no suggestion or motivation to modify Van Abbema to include such a cooling apparatus.

The present invention includes a thermal transfer unit 28 that removes heat from the compressed air exiting the air outlet port 32 of the air pump 18. According to Applicant's invention, the air exiting air pump 18 is cooled so as to avoid any adverse effect on the wine product. For example, hot air can damage the wine product by killing the yeast responsible for fermenting the wine.

There are at least three reasons why one skilled in the art would not incorporate a cooling apparatus into the device of Van Abbema. First, as described above, Van Abbema includes a fan 10, which would not compress the air enough to substantially raise its temperature. Second, Van Abbema discloses a pneumatic conveying apparatus for transporting grain, which to Applicant's knowledge is not particularly susceptible to a moderate temperature increases. Third, because there is no expected advantage, incorporating a cooling device into the pneumatic conveying apparatus of Van Abbema would only add unnecessary complexity and cost to the apparatus.

Because Van Abbema provides no suggestion or motivation for modification to obtain the devices claimed by Claims 6 and 16, and because Van Abbema does not teach or suggest all the limitations of Claims 6 and 16, no prima facie case of obviousness can be established with respect to Claims 6 and 16.

Applicants also note that Claims 6 and 16 depend directly from Claims 1 and 12, respectively, and therefore each include all the limitations of their respective base Claims 1 and 12. As described above, Van Abbema does not teach all the limitations of amended Claims 1 and 12, and therefore does not teach all the limitations of Claims 6 and 16.

Claims 7 and 17

With regard to Claims 7 and 17, Van Abbema does not teach or suggest "a demister for removing moisture from air entering the vacuum source," as recited by Claim 7 or "a demisting

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apparatus for removing moisture from air exiting the separator," as recited by Claim 17. In addition, Applicants respectfully aver that there is no suggestion or motivation in the prior art to modify the apparatus of Van Abbema to include "a demister" or "a demisting apparatus" as recited by Claims 7 and 17, respectively. In particular, Van Abbema is directed to a pneumatic conveying apparatus for transporting dry grain. In contrast, the present invention is directed to conveying a liquid or liquid-solid wine product, which adds humidity to the air flowing in the pump. In addition, certain wine vapors can be harmful to air pumps over time. Therefore, the demister 39 of the present invention removes water and wine vapor from the air traveling to the air pump 18. Van Abbema, on the other hand, does not recognize a need for drying air or removing harmful vapors from the air supply of the fan 10 thereof. Instead, Van Abbema provides a filter screen 31 to prevent airborne particulate matter from reaching the fan 10. Thus, a demisting apparatus would only add cost and complexity to the pneumatic conveying apparatus of Van Abbema, without providing any expected benefit. For the above reasons, Van Abbema does not teach or suggest a demisting apparatus, nor does the prior art provide a suggestion or motivation for modification to incorporate a demisting apparatus in Van Abbema's pneumatic conveying apparatus.

Finally, Claims 7 and 17 depend directly from Claims 1 and 12, respectively, and therefore each include all the limitations of their respective base Claims 1 and 12. As described above, Van Abbema does not teach all the limitations of amended Claims 1 and 12, and therefore does not teach all the limitations of Claims 7 and 17.

Because the prior art provides no suggestion or motivation for modification to obtain the devices claimed by Claims 7 and 17, and because Van Abbema does not teach or suggest all the limitations of Claims 7 and 17, no prima facie case of obviousness is established with respect to Claims 7 and 17.

Claims 20-22

Claims 20-22 are rejected under 35 U.S.C. § 103 as being unpatentable over Van Abbema (USPN 4,572,726) taken together with Lane et al. (2005/0000581). The Examiner writes:

Van Abbema teaches all of the limitations of claim 20 but is silent as to a silencer for reducing noise from the compressed air source. Lane et al. teaches a blower (26), a silencer (24) connected

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to the inlet of the blower, and a silencer (28) connected to the outlet of the blower. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a silencer connected to the compressed air source of Van Abbema for reducing noise from the compressed air source at the inlet and the outlet.

Applicants respectfully traverse.

Initially, Applicants would like to point out that Claims 20-22 depend either directly or indirectly from amended Claim 12 and are distinguished from the cited prior art for at least the reasons provided above with respect to amended Claim 12.

In addition, as discussed above, because Van Abbema discloses only a fan 10, there is no motivation to incorporate one or more silencers into his pneumatic conveying apparatus. In particular, a fan is quiet compared to an air source that pressurizes air, such as an air pump or a blower. Van Abbema does not even hint at a need for a silencer or that noise from fan 10 is a problem.

Therefore, because the cited prior art does not teach or suggest all the limitations of any of Claims 20-22, nor is there any suggestion or motivation to combine the cited references, no *prima facie* case of obviousness is established with respect to any of Claims 20-22.

For the above reasons Applicants request reconsideration and withdrawal of the rejections under 35 U.S.C. § 103.

Allowable Subject Matter

Applicants appreciate the Examiner's indication that Claims 15 and 26 contain allowable subject matter. Claims 15 and 26 remain as filed, but are indirectly amended as a result of amendments to their base claims.

New Claims

New Claims 33-35 are added. Claims 33-35 are directed to an agitator which permits air to be drawn into the chamber/separator in order to agitate the wine product and prevent clogging of the pressure valve. Support for Claims 33-35 can be found in Applicants' original specification at least at Page 6, Lines 13-14 and Fig. 4 of the drawings as filed. No new matter is added.

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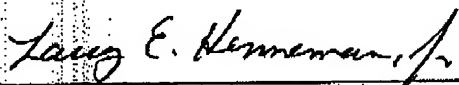
Request for Constructive Assistance

Applicants believe that this application discloses patentable subject matter, that the pending claims are directed to that subject matter, and that the pending claims distinguish over the prior art of record. However, Applicants also recognize that the patentable subject matter of the present application is somewhat challenging to claim in a way that gives Applicants the scope of protection to which they are entitled. For example, should the Examiner interpret the term "air pump" to include a fan, then it will be difficult for Applicants to claim this important distinction of Applicants invention. Therefore, should the Examiner disagree that the pending claims are allowable, Applicants respectfully request the constructive assistance of the Examiner, pursuant to M.P.E.P § 707.07(j). Indeed, Applicants welcome any suggestions the Examiner might have for distinguishing the present invention over the prior art of record.

For the foregoing reasons, Applicants believe Claims 1-35 are in condition for allowance. Should the Examiner undertake any action other than allowance of Claims 1-35, or if the Examiner has any questions or suggestions for expediting the prosecution of this application, the Examiner is requested to contact Applicants' attorney at (269) 279-8820.

Respectfully submitted,

Date: 8/8/05


Larry E. Henneman, Jr., Reg. No. 41,063
Attorney for Applicant(s)
Henneman & Saunders
714 W. Michigan Ave.
Three Rivers, MI 49093

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